

Remarks/Arguments

Claims 1-2, 4-23, 25-38, 40, 42-44 and 46-64 are pending in the above-captioned application, claims 3, 24, 39, 41 and 45 having been previously withdrawn. Claims 57-64 have been added herein. There is replete support throughout the specification and Examples for the subject matter of these new claims (e.g., paragraphs [0069], [0071] and [0095-0099]), and thus no new matter is entered. Claims 1, 4-7, 23, 40, 42-44, 46-50, and 54-56 are amended herein. Independent claims 1, 23, 40 and 43 are amended herein to more particularly point out that it is the van der Waals forces between the nanofibers and the secondary surface(s) that substantially generates the adhesion therebetween. In addition, claim 23 has been amended to recite that only one of the surfaces to be adhered comprises nanofibers, and claims 40 and 43 have been amended to recite that the nanofibers comprise semiconductor nanofibers. These amendments are fully supported within the specification at, e.g., paragraphs [0028], [0029], [0069], [0071] and [0095-0099]. Accordingly, no new matter is presented.

Examiner Interview

Initially, Applicants are grateful to the Examiner for conducting a telephone interview with Applicant's undersigned representative and Applicant on May 16, 2005, during which Applicant's representative, the Examiner and Applicant discussed the outstanding Office Action and cited references and Applicant's arguments for overcoming the outstanding rejections.

Claim Objections

Claims 4-7 were objected to because they depended from withdrawn claim 3. Claims 47-50 were objected to because they depended from withdrawn claim 45. Claims 4-7 have been amended herein to properly depend from claim 1, and claims 47-50 have been amended herein to properly depend from claim 43. Accordingly, the basis for these claim objections should now be overcome.

Rejections Under 35 U.S.C. §112

Claims 40-56 were rejected under 35 U.S.C. Section 112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention, because claims 40 and 43 recited the limitation "second surface" which lacked antecedent basis in the claims. Claims 40 and 43 have been amended herein to remove the basis for the Section 112 rejections of these claims.

Rejections Under 35 U.S.C. §103(a)

Claims 1, 2, 8-23, 25-38, 40, 42-44, 46, and 51-56 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Tomanek et al. PCT Publication WO 99/40812 ("Tomanek"). As discussed with the Examiner, Applicant respectfully submits that the Tomanek reference fails to teach or disclose the presently claimed invention. In particular, Tomanek appears to be directed to a "hook and loop" configuration for joining articles together that is virtually indistinguishable from Velcro®. This relies upon a mechanical linking of two hooks or loops in order to join two articles together. The present invention of independent claims 1, 23, 40 and 43, on the other hand, is directed to the use of nanofibers, and particularly contact with side surfaces of nanofibers, to join articles through the resultant van der Waals forces, wherein the van der Waals forces are sufficient to adhere the articles together. In addition, independent claim 23 includes the further limitation that only one of the two surfaces to be adhered comprises nanofibers, wherein the contacting of the nanofibers to the secondary surface (without nanofibers) creates van der Waals forces which are sufficient to adhere the surfaces together. Tomanek requires that both surfaces include nanoscale fastening elements to provide a mechanical linking arrangement to join the articles together. Also, claims 40 and 43 (and claims 57-64) include the further limitation that the nanofibers are semiconductor nanofibers. Tomanek does not disclose the use of semiconductor nanofibers (e.g., see page 4, lines 14-21 of Tomanek). Accordingly, Applicant respectfully submits that the rejection based upon Tomanek is overcome, and its withdrawal is respectfully requested.

Claims 1, 2, 8-12, 22, 23, 25-38, 40, 42-44, 46 and 56 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Lee et al. 2004/0098023 ("Lee"). The rejection on this basis is respectfully traversed. Applicant respectfully points out that Lee is directed to a vaso-occlusive device for occlusion of a body cavity. The vaso-occlusive device includes a core member and a fibrous structure coupled to the core member. The fibrous structure comprises strands of polymer nanofibers that are typically fabricated by an electrospinning process (e.g., paragraphs [0040] and [0041] of Lee). The architecture of the fibrous structure may provide a high level of surface area to which cells may attach (e.g., paragraph [0016]). Applicant respectfully submits that Lee has little or no relation to the use of nanofibers as the adhesive element for joining two (or more) articles together through van der Waals interactions. As noted above, the present invention of independent claims 1, 23, 40 and 43 is directed to the use of nanofibers, and particularly contact with side surfaces of nanofibers, to join articles through the resultant van der Waals forces, wherein the van der Waals forces are sufficient to adhere the articles together. As discussed with the Examiner, Lee does not recognize or teach this aspect of the presently claimed invention. Also, claims 40 and 43 (and claims 57-64) include the further limitation that the nanofibers are semiconductor nanofibers. Lee does not disclose the use of semiconductor nanofibers (e.g., see paragraph [0041] of Lee). Accordingly, Applicant respectfully submits that the rejection based upon Lee is overcome, and its withdrawal is respectfully requested.

Respectfully submitted,



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